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MINUTES OF THE MEETING OF THE BOARD OF DIRECTORS, HELD
SEPTEMBER 28, 1889, AT THE LICK OBSERVATORY.

A quorum was present.

The report of the Treasurer was received and ordered on file.

The printing of a circular of information was authorized.

Hon. R. W. WATERMAN, Governor of California; HENRY LORD BOULTON, Esq., Caracas, Venezuela; Mrs. ANNA PALMER DRAPER, New York City, were duly elected as life members of the Society.

It was *Resolved*, That the design for the Society's diploma recommended by the Committee be adopted, and that 500 copies of it be printed by Messrs. BRITTON & REY.

Mr. PIERSON reported that the Society had been incorporated on August 28, 1889.

The thanks of the Board of Directors were offered to Mr. PIERSON for his kind services in the matter of incorporating the Society, and also to Mr. KNOX, notary. The fees to State officers were ordered paid.

It was ordered that the Secretary in San Francisco be furnished with a revolving fund of \$10 for the payment of petty bills. Adjourned.

MINUTES OF THE MEETING OF THE ASTRONOMICAL SOCIETY OF THE
PACIFIC, HELD SEPTEMBER 28, 1889, AT THE
LICK OBSERVATORY.

[PREPARED BY THE SECRETARIES FOR PUBLICATION.]

The minutes of the meeting of July 27 were read and approved.

A list of presents to the Society was read, and thanks were returned to the donors.

The following persons were elected to membership (the names of life-members, duly elected by the Board of Directors, are marked with a star (*)):

HENRY LORD BOULTON, F. R. A. S.*	Caracas, Venezuela.
Rev. A. L. BREWER,	San Mateo, Cal.
GEORGE W. BEAVER,	418 California Street, San Francisco, Cal.
Hon. JOHN L. BEARD,	Centreville, Alameda Co., Cal.
A. J. BURNHAM,	Lick Observatory, Cal.
Mrs. ANNA PALMER DRAPER,*	271 Madison Avenue, New York City.
W. E. DOWNS,	Berkeley, Cal.
S. J. CUNNINGHAM,	Swarthmore College, Delaware Co., Penn.
Prof. GEO. C. EDWARDS,	Berkeley, Cal.
Prof. T. C. GEORGE,	University of the Pacific, San José, Cal.
Prof. ALFRED HIGBIE,	University of the Pacific, San José, Cal.
Dr. J. C. HAWVER,	Auburn, Cal.
Hon. W. H. JORDAN,	328 Montgomery Street, San Francisco, Cal.
Prof. JOSIAH KEEP,	Mills College, Alameda Co., Cal.
Miss LAURA KIMBER,	Occidental Hotel, San Francisco, Cal.
Dr. A. LILIENCRANTZ,	1459 Telegraph Avenue, Oakland, Cal.
F. G. MONTEALEGRE,	230 California Street, San Francisco, Cal.
President C. C. STRATTON,	Mills College, Alameda Co., Cal.
FREDERICK C. TERRY,	529 Commercial Street, San Francisco, Cal.
OTTO VON GELDERN,	1905 Polk Street, San Francisco, Cal.
Rev. J. H. WYETH,	Oakland, Cal.
Hon. R. W. WATERMAN,*	Sacramento, Cal.
E. C. WINCHELL,	1214 Grove Street, Oakland, Cal.
EDWARD B. YOUNG,	430 Montgomery Street, San Francisco, Cal.

The design for the Society's diploma, which was recommended by the Committee and has been adopted by the Board of Directors, was exhibited to the meeting.

(Extract from the Report of the Committee on the Diploma.)

"A design for this diploma was prepared by the Committee and sent to Mr. P. R. CALVERT of Nashville, who has made the finished drawing.

"As the Astronomical Society of the Pacific owes its origin to the association of amateur and professional astronomers in the observation of the Total Solar Eclipse of January 1, 1889, it was thought appropriate to give a chief position in the diploma of the Society to the Sun's Corona as then displayed. Accordingly, the centre of the upper panel contains the Sun, the Moon and the Corona of January, 1889. To the left and right of this are the symbols of the eight major planets. The twelve medallions of the lower panel include the twelve Zodiacal signs, copied from the beautiful designs of Mr. VEDDER. The right hand panels represent first, the great comet of 1858, and second, the configuration of the Constellation of Orion. The stars of this constellation may stand for the stellar universe; while they also remind us that the central star of the sword-handle is the nucleus of the grandest of all the nebulae. The drawing of the Muse of Astronomy—*Urania*—in the left-hand panel is copied from the antique statue of the Vatican. The national coat of arms in the upper left-hand panel designates the country in which the Society has its seat, and to which the work of our members should bring increasing honor as time goes on."

E. S. HOLDEN, E. E. BARNARD, W. B. TYLER, *Committee*.

It was announced that Mr. DONOHUE had secured very satisfactory designs for the Comet Medal from M. DUBOIS in Paris, and that the dies were now making.

The Society was also notified that Messrs. BURNHAM and SCHAEBERLE were to leave California September 29th or 30th for South America, on the expedition to observe the Total Eclipse of December 21st. Thanks to the generosity of Mr. CROCKER, the expedition is completely equipped, and, barring bad weather, is sure of success.

The U. S. Government will send an expedition in the U. S. S. *Pensacola*. Five thousand dollars has been appropriated to cover the expenses. The expedition is under Professor TODD. The vessel will touch at St. Paul de Loanda, and from thence two parties will, it is said, separate and go to points on the Coanza River.

The English expedition to South America under Rev. Father S. J. PERRY, F. R. S., will take station at Salute I., near Cayenne. Mr. TAYLOR, F. R. A. S., goes to St. Paul de Loanda. Each of these expeditions has the same programme and twin instruments, viz: an ABNEY 4-inch photographic lens and a 20-inch reflector of 45 inches focus. It is hoped to get sixteen pictures at each station. No spectroscopic work is to be attempted. Miss BROWN and Miss JEFFERYS, who observed the eclipse of 1887 in Russia, expect to observe that of next December in Trinidad. H. M. S. *Comus* is placed at the disposal of the English expeditions by the British Admiralty.

It is to be regretted that the Lick Observatory Expedition is (apparently) the only one provided with a lens of more than 45-inch focus. The experience of last January seems to have shown that the solar images from lenses of less than 60 or 70 inches focus are too small to show much detail in the *inner* corona.

The papers presented were:

On the Companions to BROOKS' Comet (July 23, 1889) discovered at the Lick Observatory, by E. E. BARNARD.

Drawings of *Jupiter* made with the 26-inch Equatorial at Washington during 1875, by E. S. HOLDEN.

Drawings of *Jupiter* made with a 5-inch Equatorial at Nashville during the years 1879-1883, by E. E. BARNARD.

(The drawings of *Jupiter* made by Mr. KEELER with the 36-inch Equatorial during the present opposition were not exhibited for lack of time.)

On the Establishment of a Standard Meridian Line for Santa Clara County, California, by JAMES E. KEELER.

Occultations of Stars by the Moon, by A. O. LEUSCHNER.

Conjunction of *Mars* and *Saturn*, September 20, 1889, by W. E. DOWNS.

On the Photographic Brightness of the Fixed Stars, by J. M. SCHAEBERLE.

These papers will be printed in full or in abstract in numbers 4 and 5 of the Publications.

The Society then adjourned to meet at its rooms, 408 California Street, San Francisco, on November 30, 1889.

OFFICERS OF THE SOCIETY.

EDWARD S. HOLDEN (Lick Observatory),	President
WM. M. PIERSON (76 Nevada Block, S. F.),	
W. H. LOWDEN (213 Sansome Street, S. F.),	
FRANK SOULÉ (Students' Observatory, Berkeley),	} Vice-Presidents
CHAS. BURCKHALTER (Chabot Observatory, Oakland),	
J. M. SCHAEBERLE (Lick Observatory),	} Secretaries
E. J. MOLERA (850 Van Ness Avenue, S. F.),	Treasurer

Board of Directors—Messrs. ALVORD, BOERICKE, BURCKHALTER, GIBBS, GRANT, HOLDEN, LOWDEN, MOLERA, PIERSON, SCHAEBERLE, SOULÉ.

Finance Committee—Messrs. GIBBS, PIERSON, MOLERA.

Committee on Publication—Messrs. DEWEY, TREAT, ZIEL.

Committee on the Comet Medal—Messrs. HOLDEN (*ex-officio*), SCHAEBERLE, BURCKHALTER.

NOTICE.

Members are requested to preserve the copies of the Publications of the Society as sent to them. At certain intervals a title page and index of the preceding numbers will also be sent to the members, who can then bind the numbers together into a volume.

The titles of papers for reading should be communicated to either of the Secretaries as early as possible.

Those members who propose to attend any or all of the meetings at Mount Hamilton during the summer should communicate with Mr. BURCKHALTER, at the rooms of the Society, 408 California Street, San Francisco, in order that arrangements may be made for transportation, lodging, etc.

